

ABSTRACT**METHOD AND SYSTEM FOR THREAD-BASED MEMORY SPECULATION
IN A MEMORY SUBSYSTEM OF A DATA PROCESSING SYSTEM**

A data processing system includes a system memory, one or more processing cores, and a memory controller that controls access to a system memory. The memory controller includes a memory speculation mechanism that stores historical information regarding prior memory accesses. In response to a memory access request, the memory controller speculatively initiates access to the system memory based upon the historical information in the memory speculation mechanism in advance of receipt of a coherency message indicating that the memory access request is to be serviced by reference to the system memory.